

Claims

[c1] What is claimed is:

1. An image reading device comprising:

a housing;

a lens installed inside the housing for focusing light;

a photosensor installed on a first side of the lens for converting light outputted from the lens into digital signals; and

a plurality of reflectors installed on a second side of the lens for reflecting light inputted into the image reading device to form a linear optical path in order to guide light to the photosensor via the lens;

wherein no reflector is installed on the first side of the lens.

[c2] 2. The image reading device of claim 1 wherein the linear optical path passes between two reflectors closest to the lens, and reaches the photosensor via the lens.

[c3] 3. The image reading device of claim 1 wherein two reflectors closest to the lens are capable of partially covering an edge ring of the lens but not a main part of the lens for allowing light to focus on the photosensor via the lens.

- [c4] 4.The image reading device of claim 1 wherein the image reading device further comprises a light source for generating light.
- [c5] 5.The image reading device of claim 1 wherein the photosensor is a charge coupled device (CCD).
- [c6] 6.The image reading device of claim 1 wherein the photosensor is a complementary metal-oxide semiconductor (CMOS).
- [c7] 7.The image reading device of claim 1 wherein the image reading device is a scanning module of a scanner having three reflectors.
- [c8] 8.The image reading device of claim 1 wherein the image reading device is a scanning module of a scanner having four reflectors.
- [c9] 9.The image reading device of claim 1 wherein the image reading device is a scanning module of a scanner having five reflectors.
- [c10] 10.A scanning module of a scanner comprising:
 - a housing;
 - a lens installed inside the housing for focusing light;
 - a photosensor installed on a first side of the lens for converting light outputted from the lens into digital sig-

nals; and

a plurality of reflectors installed on a second side of the lens for reflecting light inputted into the scanning module to form a linear optical path in order to guide the light to the photosensor via the lens;
wherein no reflector is installed on the first side of the lens.

[c11] 11.The scanning module of claim 10 wherein the linear optical path passes between two reflectors closest to the lens, and reaches the photosensor via the lens.

[c12] 12.The scanning module of claim 10 wherein two reflectors closest to the lens are capable of partially covering an edge ring of the lens but not a main part of the lens for allowing light to focus on the photosensor via the lens.

[c13] 13.The scanning module of claim 10 wherein the scanning module further comprises a light source for generating light.

[c14] 14.The scanning module of claim 10 wherein the photosensor is a CCD.

[c15] 15.The scanning module of claim 10 wherein the photosensor is a CMOS.

- [c16] 16.The scanning module of claim 10 wherein the scanning module comprises three reflectors.
- [c17] 17.The scanning module of claim 10 wherein the scanning module comprises four reflectors.
- [c18] 18.The scanning module of claim 10 wherein the scanning module comprises five reflectors.